Appln. Serial No. 09/995,294
Amendment Dated March 19, 2008
Reply to Office Action Mailed December 21, 2007

AMENDMENTS TO THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the application:

1   1.   (Currently Amended) A method for characterizing a network connection
2   comprising:
3   receiving parameters that specify a network connection;
4   conveying to a protocol engine at least one of the received parameters, wherein
5   the protocol engine is to implement a protocol stack;
6   receiving state variable information from the protocol engine pertaining to the
7   network connection according to the conveyed at least one of the received parameters;
8   sensing when the network connection is initiated according to the received state
9   variable information; and
10   storing the state variable information.

1   2.   (Currently Amended) The method of Claim 1 wherein receiving state variable
2   information comprises:
3   conveying to the [[a]] protocol engine a parameter at least one of the parameters
4   comprises conveying to the protocol engine including at least one of a protocol identifier, a
5   source address, a source port, a destination address and a destination port; and
6   receiving from the protocol engine a state variable for the network connection
7   according to the parameter.
8

1   3.   (Original) The method of Claim 1 wherein sensing when the network connection
2   is initiated comprises monitoring the value of a state variable indicative of the connection state of
3   the connection.

1   4.   (Original) The method of Claim 1 wherein sensing when the network connection
2   is initiated comprises monitoring the value of a TCP/IP state variable called "STATE".

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1   5.   (Original) The method of Claim 1 further comprising:

2   sensing when the network connection terminates according to the state variable

3   information;

4   retrieving stored state variable information according to the network connection

5   after the network connection terminates; and

6   creating a history of the network connection according to the state variable

7   information.

1   6.   (Original) The method of Claim 5 wherein creating a history of the network

2   connection comprises:

3   developing a network connection profile from the state variable information; and

4   creating a history of the network connection profile.

1   7.   (Original) The method of Claim 6 wherein creating a history of the network

2   connection profile comprises detecting an exceptional event.

1   8.   (Original) The method of Claim 7 further comprising analyzing the exceptional

2   event.

1   9.   (Original) The method of Claim 1 further comprising:

2   retrieving the state variable information while the network connection continues;

3   and

4   making the state variable information available on a periodic basis.

1   10.   (Original) The method of claim 9 further wherein making state variable

2   information available comprises:

3   creating a dynamic profile of the network connection according to the state

4   variable information; and

5   making the dynamic profile available on a periodic basis.

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1   11.   (Currently Amended) A network connection analysis unit capable of

2   characterizing a network connection, said network connection analysis unit comprising:

3   a supervisor comprising:

4   a command register to receive ~~capable of receiving~~ parameters that specify

5   a network connection, and

6   a source address register to receive ~~capable of receiving~~ an address

7   referencing the location of state variables in a state memory;

8   a supervisory controller to ~~capable of~~:

9   ~~directing~~ direct a state variable request to a protocol engine

10   according to the parameters, wherein the protocol engine is to implement a protocol stack;

11   receive the state variables provided by the protocol engine in

12   response to the state variable request;

13   ~~sensing~~ sense when the network connection is initiated by

14   monitoring a location in the state memory as referenced by the contents of the source address

15   register, and

16   a first computer readable medium controller to direct ~~capable of directing~~

17   a plurality of the state variables from the state memory to a computer readable storage medium

18   when the network connection is initiated.

1   12.   (Currently Amended) The network connection analysis unit of Claim 11 wherein

2   the command register generates parameters including at least one of a protocol identifier, a

3   source address, a source port, a destination address and a destination port and wherein the

4   controller is to further load ~~capable of loading~~ into the source address register a memory

5   reference received from [[a]] the protocol engine.

1   13.   (Original) The network connection analysis unit of Claim 11 wherein the state

2   memory referenced by the source address register contains an indictor of activity of the network

3   connection.

1   14.   (Original) The network connection analysis unit of Claim 11 wherein the state

2   memory referenced by the source address register contains a TCP/IP state variable called

3   "STATE".

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1   15.   (Currently Amended) The network connection analysis unit of Claim 11 further

2 comprising an off-line connection analyzer comprising:

3   an off-line command register to receive ~~capable of receiving~~ an off-line analysis

4 request that includes a connection specifier;

5   an off-line computer readable medium controller to retrieve ~~capable of retrieving~~

6 state variables from a computer readable medium according to the connection specifier;

7   a format table to convert ~~capable of converting~~ the state variables into a print

8 stream;

9   an off-line analysis controller to cause ~~capable of causing~~ the second computer

10 readable medium controller to retrieve state variables and further to direct ~~capable of directing~~

11 the retrieved state variables to the format table.

1   16.   (Currently Amended) The network connection analysis unit of Claim 15 wherein

2 the format table includes a profile description that correlates one or more state variables to a

3 connection profile.

1   17.   (Currently Amended) The network connection analysis unit of Claim 16 wherein

2 the off-line connection analyzer further comprises an exceptional event detector to detect ~~capable~~

3 ~~of detecting~~ an exceptional event.

1   18.   (Currently Amended) The network connection analysis unit of Claim 17 wherein

2 the exceptional event detector is to analyze ~~capable of analyzing~~ the exceptional event.

1   19.   (Currently Amended) The network connection analysis unit of Claim 11 further

2 comprising a real-time connection analyzer comprising:

3   a real-time command register to receive a ~~capable of receiving an~~ real-line

4 analysis request that includes a connection specifier;

5   a real-time computer readable medium controller to retrieve ~~capable of retrieving~~

6 state variables from a computer readable medium according to the connection specifier; and

7   a display subsystem to generate ~~capable of generating~~ a display signal according

8 to the retrieved state variables.

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1   20.   (Currently Amended) The network connection analysis unit of Claim 19 wherein

2   the display subsystem comprises:

3   a profile generator to create capable of creating a profile of a network connection.

1   21.   (Currently Amended) A network connection analysis system comprising:

2   a memory to store capable of storing instructions;

3   a processor to execute capable of executing instructions stored in the memory;

4   and

5   a network connection characterization instruction sequence that, when executed

6   by the processor, minimally causes the processor to:

7   receive parameters that specify a network connection;

8   convey to a protocol engine at least one of the received parameters,

9   wherein the protocol engine is to implement a protocol stack;

10   receive state variable information from the protocol engine pertaining to

11   the network connection according to the conveyed at least one of the received parameters;

12   sense when the network connection is initiated according to the received

13   state variable information; and

14   store the state variable information.

1   22.   (Currently Amended) The network connection analysis system of Claim 21

2   wherein the at least one of the parameters includes the network connection characterization

3   instruction sequence includes a state variable information receiver instruction sequence that,

4   when executed by the processor, causes the processor to receive state variable information by

5   minimally causing the processor to:

6   convey to a protocol engine a parameter including at least one of a protocol

7   identifier, a source address, a source port, a destination address and a destination port; and

8   receive from the protocol engine state variables for the network connection according to the

9   parameter.

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1   23.   (Original) The network connection analysis system of Claim 21 wherein the

2   network connection characterization instruction sequence causes the processor to sense when the

3   network connection has been initiated by minimally causing the processor to monitor the value

4   of a state variable that is indicative of the connection state of the connection.

1   24.   (Original) The network connection analysis system of Claim 21 wherein the

2   network connection characterization instruction sequence causes the processor to sense when the

3   network connection has been initiated by minimally causing the processor to monitor the value

4   of a TCP/IP state variable called "STATE".

1   25.   (Original) The network connection analysis system of Claim 21 further

2   comprising an off-line connection analysis instruction sequence that, when executed by the

3   processor, minimally causes the processor to:

4   sense when the network connection terminates according to the state variable

5   information;

6   retrieve stored state variable information after the network connection terminates;

7   and

8   create a history of the network connection according to the state variable

9   information.

1   26.   (Original) The network connection analysis system of Claim 25 wherein the off-

2   line connection analysis instruction sequence comprises a network connection profile creation

3   instruction sequence that, when executed by the processor, causes the processor to create a

4   history by minimally causing the processor to:

5   develop a network connection profile from the state variable information; and

6   create a history of the network connection profile.

1   27.   (Original) The network connection analysis system of Claim 26 wherein the

2   network connection profile creation instruction sequence comprises an exceptional event

3   detection instruction sequence that, when executed by the processor, minimally causes the

4   processor to detect an exceptional event.

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1   28.   (Original) The network connection analysis system of Claim 27 wherein the

2   network connection profile creation instruction sequence further comprises an exceptional event

3   analysis instruction sequence that, when executed by the processor, minimally causes the

4   processor to analyze the exceptional event.

1   29.   (Currently Amended) The network connection analysis system of Claim 21

2   further comprising:

3   a display driver to generate ~~capable of generating~~ a display signal; and

4   a real-time connection analysis instruction sequence that, when executed by the

5   processor, further minimally causes the processor to:

6   retrieve the state variable information while the network connection

7   continues; and

8   direct the state information to the display driver.

1   30.   (Original) The network connection analysis system of Claim 29 wherein the real-

2   time connection analysis instruction sequence comprises a dynamic profile generation instruction

3   sequence that, when executed by the processor, minimally causes the processor to:

4   create a dynamic profile of the network connection according to the state variable

5   information; and

6   direct the dynamic profile to the display driver.

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1   31.   (Currently Amended) A computer-readable storage medium having computer-

2   executable functions for characterizing a network connection comprising:

3   a network connection characterization instruction sequence that, when executed

4   by a processor, minimally causes the processor to:

5   receive parameters that specify a network connection;

6   convey to a protocol engine at least one of the received parameters,

7   wherein the protocol engine is to implement a protocol stack;

8   receive state variable information from the protocol engine pertaining to

9   the network connection according to the conveyed at least one of the received parameters

10   sense when the network connection is initiated according to the received

11   state variable information; and

12   store the state variable information.

1   32.   (Currently Amended) The computer-readable storage medium of Claim 31

2   wherein the at least one of the parameters includes network connection characterization

3   instruction sequence includes a state variable information receiver instruction sequence that,

4   when executed by a processor, causes the processor to receive state variable information by

5   minimally causing the processor to:

6   convey to a protocol engine a parameter including at least one of a protocol

7   identifier, a source address, a source port, a destination address and a destination port; and

8   receive from the protocol engine state variables for the network connection

9   according to the parameter.

1   33.   (Currently Amended) The computer-readable storage medium network

2   connection analysis system of Claim 31 wherein the network connection characterization

3   instruction sequence causes the processor to sense when the network connection has been

4   initiated by minimally causing the processor to monitor the value of a state variable that is

5   indicative of the connection state of the connection.

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1   34.   (Currently Amended) The ~~computer-readable storage medium~~ network

2 ~~connection analysis system~~ of Claim 31 wherein the network connection characterization

3 instruction sequence causes the processor to sense when the network connection has been

4 initiated by minimally causing the processor to monitor the value of a TCP/IP state variable

5 called "STATE".

1   35.   (Currently Amended) The computer-readable storage medium of Claim 31

2 further comprising an off-line connection analysis instruction sequence that, when executed by a

3 processor, minimally causes the processor to:

4   sense when the network connection terminates according to the state variable

5 information;

6   retrieve stored state variable information after the network connection terminates;

7 and

8   create a history of the network connection according to the state variable

9 information.

1   36.   (Currently Amended) The computer-readable storage medium of Claim 35

2 wherein the off-line connection analysis instruction sequence comprises a network connection

3 profile creation instruction sequence that, when executed by a processor, causes the processor to

4 create a history by minimally causing the processor to:

5   develop a network connection profile from the state variable information; and

6   create a history of the network connection profile.

1   37.   (Currently Amended) The computer-readable storage medium of Claim 36

2 wherein the network connection history profile instruction sequence comprises an exceptional

3 event detection instruction sequence that, when executed by a processor, minimally causes the

4 processor to detect an exceptional event.

.1   38.   (Currently Amended) The computer-readable <u>storage</u> medium of Claim 37

2   wherein the network connection profile creation instruction sequence further comprises an

3   exceptional event analysis instruction sequence that, when executed by a processor, minimally

4   causes the processor to analyze the exceptional event.

1   39.   (Currently Amended) The computer-readable <u>storage</u> medium of Claim 31

2   further comprising a real-time connection analysis instruction sequence that, when executed by a

3   processor, further minimally causes the processor to:

4   retrieve the state variable information while the network connection continues;

5   and

6   direct the state information to a display driver.

1   40.   (Currently Amended) The computer-readable <u>storage</u> medium of Claim 39

2   wherein the real-time connection analysis instruction sequence comprises a dynamic profile

3   generation instruction sequence that, when executed by a processor, minimally causes the

4   processor to:

5   create a dynamic profile of the network connection according to the state variable

6   information; and

7   direct the dynamic profile to the display driver.

1   41.   (Currently Amended) A network connection analysis apparatus comprising:

2   <u>means for receiving parameters that specify a network connection;</u>

3   <u>means for conveying to a protocol engine at least one of the received parameters,</u>

4   <u>wherein the protocol engine is to implement a protocol stack;</u>

5   means for receiving state variable information <u>from the protocol engine</u> pertaining

6   to the network connection according to <u>conveyed at least one of the received</u> a set of received

7   network parameters;

8   means for sensing initiation of the network connection according to the received

9   state variable information; and

10   means for storing the state variable information.

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1   42.   (Currently Amended) The network connection analysis apparatus of Claim 41

2   wherein the <u>at least one of the parameters includes</u> ~~state variable information receiving means~~

3   ~~comprises:~~

4   ~~means for conveying to a protocol engine a parameter including~~ at least one of a

5   protocol identifier, a source address, a source port, a destination address and a destination port~~;~~

6   ~~and~~

7   ~~means for receiving from the protocol engine a state variable for the network~~

8   ~~connection according to the parameter.~~

1   43.   (Original) The network connection analysis apparatus of Claim 41 wherein the

2   means for sensing initiation of the network connection comprise a means for monitoring the

3   value of a state variable indicative of the connection state of a network connection.

1   44.   (Original) The network connection analysis apparatus of Claim 41 wherein the

2   means for sensing initiation of the network connection comprise a means for monitoring the

3   value of a TCP/IP state variable called "STATE".

1   45.   (Original) The network connection analysis apparatus of Claim 41 further

2   comprising:

3   means for sensing when the network connection terminates according to the state

4   variable information;

5   means for retrieving stored state variable information according to the network

6   connection after the network connection terminates; and

7   means for creating a history of the network connection according to the state

8   variable information.

1   46.   (Original) The network connection analysis apparatus of Claim 45 wherein

2   means for creating a history of the network connection comprises: means for developing a

3   network connection profile from the state variable information; and means for creating a history

4   of the network connection profile.

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1   47.   (Original) The network connection analysis apparatus of Claim 46 wherein

2   means for creating a history of the network connection profile comprises means for detecting an

3   exceptional event.

1   48.   (Original) The network connection analysis apparatus of Claim 47 further

2   comprising means for analyzing the exceptional event.

1   49.   (Original) The network connection analysis apparatus of Claim 41 further

2   comprising:

3   means for retrieving the state variable information while the connection

4   continues; and

5   means for making the state variable information available on a periodic basis.

1   50.   (Original) The network connection analysis apparatus of Claim 49 wherein

2   means for making the state variable information available comprises:

3   means for creating a dynamic profile of the network connection according to the

4   state variable information; and

5   means for making the dynamic profile available on a periodic basis.

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